

Name: _____ Date _____ Period _____

Use **substitution** to solve the system of equations:

$$\begin{aligned}y &= -2x + 1 \\ y &= -x + 2\end{aligned}$$

$$\begin{aligned}y &= -3x + 5 \\ y &= 2x - 10\end{aligned}$$

$$\begin{array}{r} \cancel{-3x + 5} = \cancel{2x - 10} \\ \cancel{+3x + 10} \quad \cancel{+3x + 10} \\ \hline 15 = 5x \end{array}$$

$$\frac{15}{5} = \frac{5x}{5}$$

$$3 = x$$

Substitute $x=3$ into $y=2x-10$

$$y = 2(3) - 10 = -4$$

$y = -4$ therefore $(3, -4)$

$$\begin{aligned}y &= 2 \\ y &= 2x - 3\end{aligned}$$

$$\begin{aligned}x &= -4 \\ y &= 2x - 1\end{aligned}$$

$$\begin{aligned}y &= -x + 8 \\ y &= 2x - 7\end{aligned}$$

$$\begin{aligned}y &= -x \\ y &= -2x - 2\end{aligned}$$

$$4x + 3y = 13$$

$$y = -x + 4$$

Substitute $y = -x + 4$ into $4x + 3(y) = 13$

$$4x + 3(-x + 4) = 13$$

$$x + 12 = 13$$

$$x = 1$$

Substitute $x = 1$ into $y = -x + 4$

$$y = -(1) + 4 = 3$$

$y = 3$ therefore $(1, 3)$

1. Use the equation with the isolated variable: $y = -x + 4$

2. Substitute it into the other equation: $4x + 3y = 13$

3. Rewrite this equation:
 $4x + 3(-x + 4) = 13$

4. Simplify: $x + 12 = 13$

5. Solve for the variable: $x = 1$

6. Substitute this value into #1:
 $y = -(1) + 4 = 3$

7. Solve for the other variable.

8. Write as coordinate point: $(1, 3)$

$$y = -3x$$

$$x + 6y = 38$$

$$y = x - 9$$

$$x + y = 7$$

$$x + 2y = 4$$

$$y = x - 7$$

$$y = x - 6$$

$$x - 2y = 14$$